

REMARKS

This application has been reviewed in light of the Office Action dated April 21, 2004. Claims 1-16 are presented for examination. Claims 1, 5-8, 15 and 16 have been amended to define more clearly what Applicant regards as the invention. Claims 1, 15 and 16 are in independent form. Favorable reconsideration is requested.

Claims 1-4, 15 and 16 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent No. 5,995,649 ("Marugame") in view of U.S. Patent No. 5,940,538 ("Spiegel").

Claim 1 is directed to an image processing apparatus having a selector arranged to select a plurality of feature points on or near a contour line of a region of interest, when a contour of the region of interest, in a reference image sensed at reference time or viewpoint, is input. A memory is arranged to store a connectivity information on a connectivity between the plurality of selected feature points. A seeker is arranged to seek a plurality of corresponding points, which respectively correspond to the plurality of feature points, in an image to be sought, which is sensed at another time or viewpoint.

Claim 1 further recites an extractor, arranged to extract a contour between the plurality of corresponding points as a region of interest of the image to be sought on the basis of the connectivity stored in the memory. The extractor respectively sets as start and end points two of the corresponding points that have substantially the same connectivity as the selected feature points, and performs a trace between the start and end points in accordance with a predetermined set of directions to extract the contour.

Significant advantages result from the use of predetermined set of directions in performing the trace. For example, the predetermined set of directions reduces the number of pixels the seeker must examine, thereby reducing unnecessary seeking and associated processing time, which makes the contour extraction more efficient. These features are discussed in the specification, for example, beginning at page 19, line 10.

Marugame relates to an image processor having a reference point extracting portion that extracts a reference point to be used in object extraction from an image. Corresponding points are detected in other images, and a three dimensional coordinates value of an object is calculated using the absolute position and posture parameters calculated by using an image of a reference solid and the coordinates values of the reference point and corresponding point. Contour points are extracted to show the contour of an object on the basis of coordinate values of a reference point and the three-dimensional coordinate values.

Spiegel relates to a tracking method including receiving a representation of an event including at least one dynamic object having a border and having at least one edge portion which is absent during at least a portion of the event and providing an ongoing indication of the location of the border of the object during the event.

Nothing has been found in the combination of Muragame and Spiegel, assuming *arguendo* such combination would even be permissible, that would teach or suggest setting as start and end points two of the corresponding points that have substantially the same connectivity as the selected feature points, and performing a trace

between the start and end points in accordance with a predetermined set of directions to extract the contour, as recited in amended Claim 1.

Accordingly, Claim 1 is believed to be patentable over these cited references.

Independent Claims 15 and 16 are method and computer memory medium claims, respectively, corresponding to apparatus Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

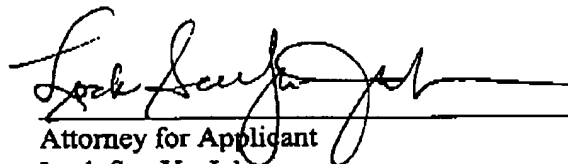
A review of the other art of record, including Murayama, has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration or reconsideration, as the case may be, of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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